



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/049,879 | 05/30/2002 | Jorunn Nilsen | 613-86 | 6277 |
| 23117 7590 09/16/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203 | | | | |
| EXAMINER | | | | |
| WOLFSCHLAGER, JEFFREY MICHAEL | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1791 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 09/16/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/049,879

Applicant(s)

NILSEN ET AL.

Examiner

JEFFREY WOLLSCHLAGER

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims and abstract filed June 11, 2008 has been entered. Claims 11 and 13 are currently amended. Claim 14 is new. Claims 11-14 are pending and under examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites "A blow moulded bimodal HDPE container having a volume of at least 8L and an ESCR of at least 500 hours wherein said HDPE consists of, as the polymer component, an...". The examiner submits that the cited recitation does not make it clear that the bimodal HDPE is the only polymer component utilized to form the container as is argued in the REMARKS filed June 11, 2008. The limitation appears to only require that the HDPE consists of the claimed ethylene homopolymer and the ethylene copolymer. The limiting effect of "as the polymer component" is unclear. The examiner submits the claim should be amended to distinctly claim the intended scope.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Debras et al. (US 6,221,982) as evidenced by Page (US 4,617,352) in view of either of Harlin et al. (US 6,090,893) or Barry et al. (US 6,403,181) and in view of either of Suttoni et al. (US 6,126,033) or McWhorter (US 4,391,128).

Regarding claims 11-14, Debras et al. teach a bimodal polyethylene wherein an ethylene homopolymer having a melt index of 5 to 200 g/10 min is combined with an ethylene copolymer (Abstract; col. 3, lines 60-66; col. 4, lines 8-30 and 46-64) to form a bimodal polyethylene having a MFR of 5 to 40 g/10 min. The bimodal polyethylene has a polydispersity of 10 to 20 which overlaps the claimed range. Further, the density set forth in Debras et al. is 0.935 to 0.955 g/cc and is more preferably 0.940 to 0.950 g/cc. Table 1 of Debras et al. disclose weight average and weight number molecular weights within the claimed ranges. The examiner notes that Debras et al. is not limited to the exact polydispersity values set forth in the Table 1 and reasonably suggests values wherein the weight average molecular weight, number average molecular weight, and polydispersity would all lie within the claimed ranges.

Regarding the molecular weight of the homopolymer, Debras et al. disclose the MFI of the homopolymer is 5 to 200 g/10 min. Page provides evidence suggesting that polyethylene material having these MFI values would have a molecular weight ranging from about 31,000 to about 94,000 (using the formulas found at col. 5, lines 18-45). Debras et al. do not teach a comonomer content of 1 to 2 wt. % or that a blow molded container having a volume of at least 8 liters is produced.

However, Harlin (col. 2, lines 22-35; col. 3, lines 48-65) and Barry (col. 1, lines 44-52; col. 4, lines 15-20) each individually disclose analogous methods wherein the comonomer content is optimized to produce desired results such as improved crack resistance. Further, Barry et al. also teach the resins may be blow molded into articles (col. 4, lines 15-20) such as bottles, containers, fuel tanks and drums. Furthermore, each of Suttoni (col. 2, lines 6-60) and McWhorter (col. 1, lines 15-57; col. 2, lines 54-58) individually disclose blow molded polyethylene containers with a volume greater than 8L are known.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have blow molded the resin disclosed by Debras et al. into a container having a size of at least 8 liters and to have optimized the comonomer content as suggested by each of Harlin and Barry for the purpose of improving properties, such as stress cracking (Harlin: col. 3, lines 48-57), and as suggested by each of Suttoni and McWhorter, in order to produce a desired product having a commercially viable size.

Moreover, the examiner notes that the combination sets forth the same claimed bimodal polyethylene material having the same claimed molecular weights, density, polydispersity, melt flow rate, and optimizable comonomer content. Accordingly, it follows that the bimodal polyethylene set forth in the combination would implicitly have the same properties as claimed (i.e. tensile modulus). Further, since the same claimed bimodal polyethylene is employed in the combination and produces the same claimed product by following the same claimed steps, the examiner submits that the same claimed physical properties and effects (i.e. ESCR) would be implicitly realized by the practice of the method set forth in the combination.

Response to Arguments

Applicant's arguments filed June 11, 2008 have been fully considered, but they are not persuasive. As an initial matter, applicant argues that the rejection combines six references and that such a combination is indicative of non-obviousness. This argument is not persuasive. The examiner notes that the rejection employs several references in the alternative. As such, for the sake of accuracy, the examiner notes that the rejection relies on no more than 4 references at any one time. Applicant argues that one having ordinary skill would not have looked to the Debras reference for teaching regarding blow molded articles. This argument is not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner notes that Debras does state that their HDPE is "particularly suited" (col. 4, lines 67) for pipe application, but the Debras reference is certainly not limited to such an application. Indeed, Debras teaches that broadened molecular weight distributions are known to be desirable in "blowing...techniques" (col. 1, lines 29-32) and the resin produced by Debras has a broadened molecular weight. Additionally, Debras teaches the mechanical properties of the resin are improved (col. 3, lines

15-21). In particular, Debras teaches the "impact resistance" of the polyethylene is improved (col. 5, lines 6-10). As acknowledged in the REMARKS filed June 11, 2008, it is known that "[f]or a blow moulded article, impact resistance is important as the container might be dropped or something dropped on it." Further, the examiner submits that both Suttoni and McWhorter teach HDPE is a suitable material for forming blow molded materials and Barry et al. also teach their "pipe resins" (looking at the title) may be blow molded into articles (col. 4, lines 15-20) such as bottles, containers, fuel tanks and drums. The examiner submits the references applied are good for all that they teach and suggest and that the references utilized in the rejection are relevant and analogous and are not solely limited to what they may be "primarily about". Applicant argues that neither Barry nor Harlin teach the claimed comonomer content. This argument is not persuasive. As set forth in the rejection, both Barry and Harlin teach optimizing the levels of comonomer to achieve desired results. As such, the amount of comonomer is effectively established as a result effective variable that would have been readily optimized. Additionally, Harlin teach the amount of the comonomer can be selected between 0.5 – 10 weight % (col. 3, lines 48-64) and even expressly states the stress cracking properties are improved considerably (col. 3, lines 53-54). Finally, applicant argues that new claim 14 distinguishes over the art of record. This argument is not persuasive. As an initial matter, the examiner notes that the claim has been rejected under 35 USC 112, second paragraph. Further, assuming for the sake of argument that the claim was clearly limited to a container consisting of the bimodal HDPE as the only polymer component, as argued, it remains unclear to the examiner how such a limitation overcomes the rejection based upon Debras. The examiner submits the claims would need to be amended to overcome the rejection of record.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1791

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./

Examiner, Art Unit 1791

September 16, 2008

/Monica A Huson/

Examiner, Art Unit 1791